

Dear masterclass responsables,

With anticipation and excitement we are looking forward to 2010 Masterclasses, starting in a few days. Your institutes will certainly be well prepared to welcome high school students to this event. With this email you will receive some instructions that may help you with your event. Please read carefully and prepare thoroughly, especially the new items: **\*\*Transmission of results via google.docs\*\*** and **\*\*Evaluation\*\***.

EXERCISES:

All exercises run from the CDs which have been distributed beforehand, on both systems, Linux and windows.

LEP EXPERIMENTS:

Z0:

Each masterclass has to do Z0 decay exercises from one of the following programs: "Identifying particles"(OPAL), "Hands-on-Cern" (DELPHI) or "A Keyhole to the Birth of Time" (DELPHI). During the final video linkup results will be combined. All important documents and counting sheets you need to download for your masterclass can be found at:

[www.physicsmasterclasses.org/mc/orga\\_exercises1.htm](http://www.physicsmasterclasses.org/mc/orga_exercises1.htm)

Z0 + alpha\_s:

On six days (17.2., 18.2., 25.2., 27.2., 2.3., 3.3.) students will also measure the strong coupling constant  $\alpha_s$ , for which we strongly recommend to use the "Hands-on-Cern" package All important documents and counting sheets you need to download for your masterclass can be found at: [www.physicsmasterclasses.org/mc/orga\\_exercises2.htm](http://www.physicsmasterclasses.org/mc/orga_exercises2.htm)

LHC EXPERIMENTS:

"Hands-on Cern" and "Identifying particles" have been updated with LHC exercises, which should be done in addition. They will take approximately 30 minutes if students go through all events, which is, however, not necessary. The results of these exercises will not be combined in the video conference, but maybe a topic of the Q&A session. You should discuss the results on a local level. Correct answers can be found here:

[www.physicsmasterclasses.org/downloads/solution.pdf](http://www.physicsmasterclasses.org/downloads/solution.pdf)

**NEW!!!** TRANSMISSION OF RESULTS:

Your results should directly be filled in the combination spread sheet. You will find it at <http://docs.google.com>

Please contact me for access details.

You should by all means familiarize beforehand with the use of the excel sheet!

### NEW!!!\_\_EVALUATION:

We are very happy to have two students who will do an evaluation on 2010 masterclasses: Frank Meier and Konrad Jende. Please do participate and help to make masterclasses even more successful!

### \_\_EVALUATION A (English, German, French and Czech):

Please find below links to the surveymonkey website. Surveymonkey is a web-based evaluation tool that enables us to carry out the evaluation, collect its responses and analyse its results at once and electronically. The evaluation of Konrad Jende as part of his thesis pre-work has got the objective to obtain a better understanding of student's interest and motivation in Particle Physics and the Masterclasses as well. In addition it is supposed to give feedback from other interesting aspects, e.g. student's views of the important exercises, that will help to develop future Masterclasses exercises based on LHC-data. The questionnaire can be found in four languages, English, German, French and Czech.

It is intended to use the evaluation directly after the measurement. You might be interested in the results of that evaluation. That is why each institute will get its own analysis. Results of the survey will also be reported to the 26th EPPOG meeting in Oslo this year. We would really appreciate your participation in the evaluation and your motivation of the students as well. Do not hesitate to contact Konrad (Konrad.Jende@cern.ch) for further questions and or comments.

German: [www.surveymonkey.com/s/PZQL65L](http://www.surveymonkey.com/s/PZQL65L)

English: [www.surveymonkey.com/s/6SV8CBY](http://www.surveymonkey.com/s/6SV8CBY)

French: [www.surveymonkey.com/s/6STC3JR](http://www.surveymonkey.com/s/6STC3JR)

Czech: [www.surveymonkey.com/s/6WTDM9J](http://www.surveymonkey.com/s/6WTDM9J)

### \_\_EVALUATION B (Danish, German, English, Greek, Italian; upon availability: Portuguese, Serbian, Spanish and Polish)

This year's Masterclasses will be accompanied by a web based survey. You can find links to the survey in several languages from the following website: <http://n.ethz.ch/~frmeier/EPPOG/>

This survey has been developed by Frank Meier of ETH Zürich, Switzerland and is a part of his research work. The application for carrying out the survey is hosted on a server at ETH in Zürich. This allows us to do the evaluation in an efficient way.

It is intend to use the evaluation directly after the measurement. You might be interested in the results of that evaluation. That is why each institute will get their own analysis. Results of the survey will presumably also be reported to the 26th EPPOG meeting in Oslo this year. We would really appreciate your participation in the evaluation and your motivation of the students as well. Do not hesitate to contact Frank (frmeier@ethz.ch) for further questions and or comments.

### \_\_VIDEO LINKUP:

The video linkup ist via EVO. Please use room Einstein in the community Universe.

On March 3rd (2 sessions in parallel) there will be a second meeting room. Instructions will be sent out beforehand.

### \_\_\_SETUP VIDEO CONFERENCE:

General instructions can be found here: [www.physicsmasterclasses.org/mc/orga\\_linkup.htm](http://www.physicsmasterclasses.org/mc/orga_linkup.htm)

We strongly recommend using a second set of PC and beamer, without transmission of audio, to display the xls-sheets or questions during the quiz.

Please display your site's name, either via your EVO username or with a card board sign in your room.

The video conference starts at 4:30 pm with the following agenda:

- 5 min Welcome and personal introduction of the moderators
- 15 min Question and answer, please ensure that a student from your site prepares and writes down a technical or scientific question!
- 20 min Central combination of results and discussion of results
- 20 min Quiz

### \_\_\_QUIZ:

Moderators will display the quiz in English. Several language versions are available, which you could display in addition at your site. You can download them from <http://docs.google.com>, as well as answer sheets. For access details, please contact me.

The quiz includes 10 questions + 2 tiebreakers. Moderators will go through these 12 questions and answers. After that you should determine the winning couple and award them with the CERN T-shirts you received together with the CDs.

If you need a further tiebreaker for final decision, please do the final tiebreaker ("Identify the four tracks from the Higgs boson") on a local level.

### \_\_\_CERTIFICATE

If you wish to hand out certificates to your participants, a template is provided here:

[www.physicsmasterclasses.org/mc/orga\\_material.htm](http://www.physicsmasterclasses.org/mc/orga_material.htm)

Hopefully there are no questions remaining unanswered. If anything is left imprecise, please do not hesitate to contact me. I will be happy to help.

Kind regards,  
Uta

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